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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,270	07/09/2003	Jiten Chatterji	HES 2002-IP-008093U1P1	1699

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EXAMINER	
SUCHFIELD, GEORGE A	

ART UNIT	PAPER NUMBER
3672	

DATE MAILED: 11/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/616,270	CHATTERJI ET AL.
	Examiner	Art Unit
	George Suchfield	3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5/10/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 7-43 been renumbered 6-42.

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 16-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The step(s) of claim 16 has not been sufficiently recited, i.e., what specific steps, such as circulating or injecting(?), comprise the "drilling, completing and/or stimulating" of claim 16. It is further not clear how the step of claim 16 relates to the method of claim 1. By contrast, claim 15 clearly calls for "placing the resulting foam fluid into a subterranean formation".

Claim 17 is deemed indefinite in that it is not clear how or when the "step of producing a fluid" is carried our relative to the steps of parent claim 1. Also, there is no antecedent basis for the recitation "the subterranean formation". Claim 18 is similarly deficient as it depends from claim 17.

Overall, claims 16-18 appear to comprise "hybrid" claims insofar as parent claim 1 is directed to a method of preparing a well fluid, while these claims are directed to a method of using the well fluid, i.e., a different statutory class of invention. Thus, it appears that claims 16-

18 would be in better form if rewritten into an independent claim(s), perhaps incorporating the limitations of claim 1.

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-42 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14, 20-33, 39-60 of U.S. Patent No. 6,619,399. Although the conflicting claims are not identical, they are not patentably distinct from each other because the well fluid component recited in pending claims 1, 19 and 33 can be construed broadly enough to include the well cementing fluid or slurry component of the corresponding patent claims 1, 39 and 53. Also, the foamed fluid or completion fluid of claims 15 and 16 are also broad enough to include the specific foamed well cementing fluid recited in the well cementing method of patent claims 20-33. It is further noted that the steps of claims 17 and 18, pending herein, will obviously be carried out by the well completion method of patent claim 20 insofar as the conventional use of a well completed by the method of patent claim 20 is for the ultimate purpose of producing mineral fluids, such as oil and/or gas, from a penetrated subterranean formation(s).

Otherwise, the limitations and/or steps of the pending claims 1-42 appear encompassed by, or correspond to the '399 patent claims 1-14, 20-33 and 39-60.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-4, 13-22, 31-34 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Michael (2001/0017223).

Michael (note Figures 2-4 and paras [0006], [0027], [0036], [0049]-[0053] and [0071]-[0075]) discloses, in one embodiment, a foam drilling fluid or a foam well completion/workover fluid, and method of preparing such fluid comprising or admixing a foamable well fluid and compressed air having an oxygen content below that necessary to support combustion of hydrocarbons, as called for in independent claims 1 and 20.

As per claims 2, 3, 20, 21, as well as independent claim 33, Michael (note [0053]) discloses that the oxygen content of the compressed and treated air may be less than 10% or even less than 5% by volume oxygen, which encompasses the ranges of these claims.

In the embodiment of Figures 2 and 3 of Michael, the treated air stream (12) may be compressed either before or after the adsorption of oxygen therefrom, i.e., contact with the adsorbent or oxygen scavenger, as called for in claims 4, 22, 34.

As per claims 13-18, 31, 32, 33 and 42 it is deemed that the process embodiments or applications recited, such as drilling or stimulating the well, are all encompassed by both the drilling phase of Michael, as well as the "non-drilling applications" (note [0071]-[0079]).

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 5, 23 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michael (2001/0017223) as applied to claims 1, 19 and 33 above, and further in view of the SPE Paper 28978 to Walker et al.

Michael does not disclose the specific oxygen adsorption material or scavenger of claims 5, 23 and 35 however the reference to Walker et al discloses a process of treating a fracturing fluid with an oxygen scavenger agent comprising one or more of the species set forth in claims 5, 23 and 35, such as sodium thiosulfate or sodium sulfite.

Accordingly, it would have been obvious to one of ordinary skill in the art to which the invention pertains, to similarly employ one or more of the oxygen scavenger compounds of Walker et al as the oxygen adsorption material in the Figures 2 and 3 process of preparing the foamed well treatment fluid in Michael, based on, e.g., the relative availability and cost effectiveness of these conventional oxygen scavenger or oxygen adsorption agents.

10. Claims 6, 7, 24, 25 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michael (2001/0017223).

Michael disclose the use of a foaming agent(s) in conjunction or combination with his reduced oxygen-content compressed air in the formulation of a foamed well fluid, followed by applying the well fluid to myriad downhole applications, including drilling , acidizing, fracturing, well completion, well workover, without specifying precise ranges or amounts of the respective components. It is deemed, however, the precise amounts or concentration ranges of the reduced oxygen content compressed air utilized, as called for in claims 6, 7, 24, 25 and 36 would have been an obvious matter of choice or design to one of ordinary skill in the art, based on, e.g., the actual borehole or well environment, or characteristics and composition of the penetrated subterranean formation(s) encountered in the field and/or result of routine experimentation for process optimization.

11. Claims 8-12, 26-30 and 37-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michael (2001/0017223) as applied to claims 1, 19 and 33 above, and further in view of Chatterji et al (6,063,738).

Chatterji et al (note col. 2, lines 1-27; lines 30-67) discloses the use of a mixture of foaming and foam stabilization surfactants in a well treatment or completion fluid, such as set forth in claims 8-12, 26-30 and 37-41.

Accordingly, it would have been obvious to one of ordinary skill in the art to which the invention pertains, to similarly utilize the exemplary mixture of foaming and foam stabilization surfactants set forth in Chatterji et al, as the foaming agent(s) in the well fluid and methods of preparing and use of Michael in order to provide an improved foamed well fluid, which will be stable and functional over a wide range of well conditions, as called for in claims 8-12, 26-30 and 38-41. It is further deemed that the respective foaming agent or other component concentration ranges are set forth in Chatterji et al or would comprise obvious matters of design or choice based on the particular well application desired.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Other references cited include well fluids and processes of preparing and/or using which may be foamed, as well as treated to remove unwanted fluid constituents.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Suchfield whose telephone number is 703-308-2152. The examiner can normally be reached on M-F (6:30 - 3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 703-308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

George Suchfield
Primary Examiner
Art Unit 3672

Gs
November 23, 2004